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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,833	01/05/2004	Tianbing Brian Teng	7293-88	6792

20575 7590 10/17/2006

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EXAMINER

PHAM, TAMMY T

ART UNIT PAPER NUMBER

2629

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



**DETAILED ACTION**

***Response to Amendment***

Claims 13-14 have been cancelled. Claims 5, 10, 12 have been amended. Claims 1-12, 14 are pending.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 10-12, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by WOOD et al.

(US Patent No: 6,877,863 B2).

As for **claim 1**, WOOD teaches of a system (10), comprising: an accelerometer (26, 28) (26, 28) to measure tilt and rotation; and a controller coupled to the accelerometer (26, 28) to predistort image data responsive to the tilt and the rotation such that the predistorted image data projects an undistorted keystone corrected image on a projection surface not perpendicular to a projection axis in Fig. 7 and in column 5, lines 10-15, lines 30-38 and in column 6, lines 5-10, lines 15-25.

**As for claims 2, 7,** WOOD teaches that the accelerometer (26, 28) is a two dimensional accelerometer (26, 28) in Fig. 7 and in column 5, lines 10-15, lines 30-38 and in column 6, lines 5-10, lines 15-25.

**As for claim 3,** WOOD teaches that the controller calculates a horizontal angle responsive to the tilt and rotation in Fig. 7 and in column 5, lines 10-15, lines 30-38 and in column 6, lines 5-10, lines 15-25.

**As for claim 4,** WOOD teaches that the system (10) projects the predistorted image data as an undistorted image displaying no keystone distortion on a the projection surface in Fig. 7 and in column 5, lines 10-15, lines 30-38 and in column 6, lines 5-10, lines 15-25.

**As for claim 10,** WOOD teaches that a method, comprising: automatically detecting a projector's position in two dimensions using a two dimensional accelerometer; predistorting image data responsive to the projector's position such that the predistorted image data projects a projected image without keystone distortion on a projection surface not perpendicular to a projection axis in Figs. 7-8 and in column 5, lines 66-32.

**As for claim 11,** WOOD teaches of automatically detecting a projector's position includes automatically detecting vertical tilt and horizontal rotation in Figs. 7-8 and in column 5, lines 66-32.

As for **claim 12**, WOOD teaches of calculating vertical and horizontal rotation angles from the vertical tilt and horizontal rotation in Figs. 7-8 and in column 5, lines 66-32.

As for **claim 15**, WOOD teaches of automatically detecting a projector's position includes using an inertial accelerometer (26, 28) in Figs. 7-8 and in column 5, lines 66-32.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over WOOD et al. (US Patent No: 6,877,863 B2) in view of Dister et al. (US Patent No: 6,289,735 B1).

As for **claim 5**, WOOD teaches that a system, comprising: position detecting means for detecting first and second positions; and predistortion means for predistorting image data responsive to the first and second positions such that the predistorted image data projects an undistorted keystone distortion corrected image on a projection surface not perpendicular to a projection axis in Figs. 7-8 and in column 5, lines 66-32.

WOOD fails to teach of a single position detecting means for detecting first and second positions.

DISTER teaches of a single position detecting means (81) for detecting first and second positions in column 6, lines 30-33.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to combine the single position detecting means of DISTER with the system of WOOD in order to provide a system for diagnosing the health of the machine and more particularly for a system and method for analyzing vibration signatures to predict and detect changes in the condition of a machine (see DISTER: column 1, lines 5-10).

As for **claim 6**, WOOD teaches that the position detecting means is an accelerometer (26, 28) in Figs. 7-8 and in column 5, lines 66-32.

As for **claim 8**, WOOD teaches that the accelerometer (26, 28) is an inertial accelerometer (26, 28) in Figs. 7-8 and in column 5, lines 66-32.

As for **claim 9**, WOOD teaches that the accelerometer (26, 28) generates a tilt signal indicative of vertical tilt; and where the accelerometer (26, 28) generates a rotation signal indicative of a horizontal rotation in Figs. 7-8 and in column 5, lines 66-32.

***Response to Arguments***

Applicant's arguments with respect to claims 1-12, 15 have been considered but are moot in view of the new ground(s) of rejection.

**As to claim 1**, in regards to the arguments that WOOD do not teach of an accelerometer to measure tilt and rotation, please refer to WOOD in Fig. 7 and in column 5, lines 10-15, lines 30-38 and in column 6, lines 5-10, lines 15-25. The definition of an accelerometer is broad and so the accelerometer (26, 28) in Fig. 7 of WOOD is sufficient to meet the broad claim limitations as currently stated.

In regards to the arguments that one of the advantages of the embodiments of the application is that they do not require multiple costly sensors and user input to effectuate keystone correction, this aspect is not included in the claim language and therefore will not be treated.

**As to claim 5**, in regards to the argument that WOOD do not teach of a single position detecting means for detecting first and second positions, Examiner still believes that WOOD reads on this amendment, however for clarity please look to the newly introduced reference of DISTER in column 6, lines 30-33. DISTER clearly teaches of a single two-axis accelerometer (81).

**As to claim 10**, in regards to the argument that WOOD do not teach of a two-dimensional accelerometer, please look at Fig. 7 and note that the combination of items 26 and 28 together is considered an accelerometer and hence reads upon the broad claim limitations as currently stated.

***Conclusion***

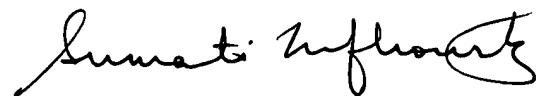
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammy Pham whose telephone number is (571) 272-7773. The examiner can normally be reached on 8:00-5:30 (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Oct. 13, 2006



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